

**National Agricultural Research, Extension,
Education and Economics Advisory Board**

David Kelly, Acting Executive Director
Room 3858 South Building
REE Advisory Board Office
U.S. Department of Agriculture
Washington, DC

Mailing Address:
STOP 0321
1400 Independence Ave SW
Washington, DC 20250-0321
Telephone: 202-720-4421
Fax: 202-720-6199

Report on Childhood Nutrition: Obesity and Malnutrition
July 16, 2010

EXECUTIVE SUMMARY

In order to assess the U.S. crisis on childhood obesity and malnutrition, the National Agricultural Research, Extension, Education and Economics Advisory Board (NAREEEAB) convened renowned experts and leadership from the public and private sector to help outline current research and programs aimed at stemming this national epidemic. Obesity in itself is a complex issue, with no simple solution or answer. Elimination of malnutrition will also be a significant challenge. Going forward, it will be important to change not only environment, but also behaviors, in order to move from programs to policies. Policies must be created that, first and foremost, prevent obesity and malnutrition, while slowing the increase of both. Based on the insights and views from the public and private sectors, the NAREEEAB submits the following recommendations for consideration.

- Collaborations between the United States Department of Agriculture (USDA) and various public/private partnerships are needed to ensure the most effective use of resources to resolve the obesity epidemic as well as malnutrition.
- Increased behavioral research funding is needed to address change strategies, a missing link in the majority of the programs and policies aimed at reversing the current obesity epidemic.
- Funding for research on new technologies for development of more nutrient-dense and affordable foods is needed to respond to the obesity crisis, and malnutrition.
- The education component of current USDA nutrition education programs needs to be simplified and emphasized for consumers.

- The transition of program outcomes to policies should be accelerated to change the underlying cultural and behavioral practices, as well as attitudes that contribute to the obesity epidemic and malnutrition.
- The communication of research findings and the advancement of applied science to the public needs to occur in a timely and consumer-friendly manner.

**National Agricultural Research, Extension,
Education and Economics Advisory Board**

David Kelly, Acting Executive Director
Room 3858 South Building
REE Advisory Board Office
U.S. Department of Agriculture
Washington, DC

Mailing Address:
STOP 0321
1400 Independence Ave SW
Washington, DC 20250-0321
Telephone: 202-720-4421
Fax: 202-720-6199

Report on Childhood Nutrition: Obesity and Malnutrition
July 16, 2010

Background

Americans spend \$147 billion on health care related to obesity (about 9-12 percent of all health care costs) and this number will continue to rise, as obesity among low income preschoolers continues to rise, especially in the minority populations. Today, 65 percent of American preschoolers are overweight and roughly 30 percent of those are considered obese. American Indian preschoolers account for 21 percent of the obesity percentages among this age group, whereas Hispanics account for 19 percent, whites 13 percent and African Americans 12 percent. There is a consensus that the major cause of obesity among this young age group is increased calorie consumption coupled with decreased energy expenditure through exercise and recreation.

Many countries face a childhood obesity epidemic, while at the same time, several others (including parts of the U.S.) face a malnutrition situation. Today, 923 million people around the globe go hungry every day, an increase of 80 million since 1990. Knowledge that 100,000 people die in the world every day from hunger including 1,000 children a day from malnutrition in India alone, illustrates the extent of the problem and the complexity of the balance of food availability and adequate nutrition. The USDA has an important role in understanding and influencing this balance.

Government/Private Sector Collaboration

Childhood obesity is not just the focus of government agencies alone, but also a multitude of private and other public entities in the U.S. Initiatives have been successfully implemented throughout the country by the Robert Wood Johnson Foundation, the American Dietetic Association Foundation and the National Dairy Council. The goals of these programs are the same, which is to reduce the prevalence of obesity among children in the U.S. by creating systemic and sustainable changes. The collaboration of USDA with one or more of organizations would ensure the most effective use of available resources for these initiatives and

could accelerate the impact of all activities. Similar collaborations could assist in addressing the malnutrition challenges.

Behavioral Science Research

Obesity is not the only nutrition research issue to be addressed by USDA. Closely related nutrition research involves the study of behaviors for eating and exercise, nutrient requirements in pediatrics, prevention of chronic diseases, and diet patterns. Throughout the on-going research, there is a lack of emphasis on more basic behavioral science research with a goal of gaining a more fundamental understanding of the factors influencing decisions about food choices and the balance between diet and exercise. The outcomes from these types of research are essential for the development of programs to change the behaviors about food choices and exercise. An understanding of “what causes people to do what they do” must be identified for the sustainability of long term solutions to the obesity crisis.

Food Science and Technology Research

There is an obvious need for promotion of more affordable and nutritious foods (fruits and vegetables) that ensure balanced diets. Foods that are just as popular and affordable as many of the foods that may contribute to the obesity crisis need to be developed and promoted. A research strategy with emphasis on improving the efficiencies of handling, storage, processing, packaging, distribution and marketing (as well as production) of these types of foods is necessary. USDA research agencies have the scientific resources to respond to this type of challenge. Examples of research needs include gaining an understanding of the factors influencing the shelf-life of tomatoes, thereby making them available to more people year round, and the formulation of more beta-glucans (heart healthy) in oats. These types of research will assist consumers in maintaining diets to avoid obesity or malnutrition (cost and availability of inexpensive and nutritious food), as well as the efforts to improve the world’s food security by providing proper nutrition where it is needed. These types of research will require a coordinated effort involving all sectors of the food chain to ensure that such foods are clearly recognized as positive components of diets associated with a healthy lifestyle.

Nutrition Education

Significant USDA resources are devoted to programs to promote healthier eating habits of all, but especially children. Presently, USDA has a wide variety of programs to feed 15 percent of the U.S. population, including the Supplemental Nutrition Assistance Program (35.9 million), the National School Lunch Program (31 million), Women, Infants, and Children (9.3 million) and several smaller programs. The USDA’s child nutrition programs are food-based and prevention-focused as demonstrated by the projects administered through the Expanded Food and Nutrition Program, the Supplemental Nutrition Assistance Program – Education, extension, and programs involving obesity prevention through the Agricultural and Food Research Initiative, the Cooperative Extension Service, including 4-H, all administered by the National Institute of Food

and Agriculture (NIFA). These programs are easily accessible, affordable, and promote behavioral change and are not reliant on drugs or surgery.

These programs, along with the educational offerings through the School Lunch Program using behavior changing protocols, are seen by the USDA as fundamental approaches to reducing childhood obesity and malnutrition. Such programs range from creating a “choice” environment during school meals, offering youth the opportunities to choose more appropriate foods throughout the school setting, and provide debit cards for foods which contribute to diets associated with a healthier lifestyle. The educational value of all of these programs must be emphasized and enhanced, and model programs with evidence of positive outcomes should be identified and used as examples for others.

Policy Implementation

USDA is not the only agency concerned and actively working to impact the childhood obesity and malnutrition crisis. National Institute of Health (NIH), often at the center stage in understanding disease and solutions, has become increasingly aware that the latest epidemic can only be resolved with a seamless agency/agency and public/private approach. U.S. policies require a shift from a disease care system to a health care system, based on the recognition that 75% of the nations’ health care dollars are spent on chronic preventable diseases. To this end, the NIH view of the epidemic mirrors that of the USDA, in that the solution will involve the promotion of healthier lifestyles throughout the population, with emphasis on improved nutrition and physical activity. Reversing the rise in obesity prevalence in America will require increased coordination between NIH obesity research and other Federal agencies, including the USDA. These types of coordination are needed to ensure the efficient movement of program outcomes into functioning policies.

Communications

Obesity and malnutrition are significant issues and contribute to a continuous flow of communications from current findings and practices. These communications carry a variety of messages about potential solutions to the obesity epidemic. Unfortunately, the results of most research are open to interpretation, and the multiple interpretations tend to confuse the consumers of food. The confusing messages contribute to a decline in the consumer’s trust in the entire food system. There is a critical need for a more coordinated approach to communication of research results and their interpretations for consumers. This approach should build credibility in all foods. USDA, in collaboration with other government agencies, is in an excellent position to develop the most appropriate messages about our food system. Both obesity and malnutrition have significant visibility among consumers and the messages about these issues must be handled in a manner to improve the understanding of foods among all consumers.

Summary

The challenges associated with obesity and malnutrition are significant and require collaborations between the United States Department of Agriculture (USDA) and various public/private partnerships. These collaborations are needed to ensure the most effective use of the resources available to resolve the obesity epidemic as well as malnutrition. An increase in funding for behavioral research is needed to address change strategies, a missing link in the majority of the programs and in policies aimed at reversing the current obesity epidemic. Specific funding for research on new technologies for development of more nutrient-dense and affordable foods is needed to respond to the obesity crisis, and malnutrition. The education component of current USDA nutrition education programs needs to be simplified and emphasized for consumers. The transition of program outcomes to policies should be accelerated in an effort to change underlying cultural and behavioral practices, as well as the attitudes that contribute to the obesity epidemic and malnutrition. Research outcomes and explanations of applied science need to be communicated to the public in a manner that builds trust in the food supply.

Work group members:

**Mary Wagner and Marianne Smith-Edge (Co-Chairs),
Dennis Heldman, Jean-Mari Peltier and Thomas Rosol**

Panelists for Review of Government Research and Outreach

David Klurfeld, National Program Leader, Human Nutrition, ARS

Molly Kretsch, Senior Advisor to the REE Under Secretary – Nutrition, Food Safety and Health;
Deputy Administrator – Nutrition, Food Safety and Quality, ARS

Van Hubbard, Rear Admiral, U.S. Public Health Service; Assistant Surgeon General; Director,
Division of Nutrition Research Coordination, NIH

Judy St. John, Associate Administrator, Research Programs, ARS

Laurian Ennevehr, Director, Food Economics Division, ERS

Helen Chipman, National Program Leader; Food and Nutrition Education Program, NIFA

Janey Thornton, Deputy Under Secretary; Food, Nutrition, and Consumer Services, USDA

Mary Gray, Special Assistant to the Administrator, Nutrition Education Evaluation, ERS

**Panelists for Review of External Outreach Programs Panel Presentation of External
Outreach Programs**

Eduardo Sanchez, Chief Medical Officer, Blue Cross/Blue Shield

Tracy Cox, President, Food, Nutrition & Policy Consultants

Joe Thompson, Robert Wood Johnson Foundation to Prevent Childhood Obesity; Arkansas
Center for Health Improvement

Jean Ragalie, Executive Vice President, National Dairy Council; Founder of Fuel Up for Play,
Action for Healthy Kids promotions programs

Katie Brown, National Nutrition Education Director; Registered Dietician Coach Program;
American Dietetic Association Foundation